

This listing of claims will replace all prior versions, and listings, of claims in the application:

**Listing of Claims:**

Claim 1 (currently amended): A catheter assembly, comprising:

- (a) a flexible tubular catheter body having an inner lumen; and
- (b) at least one fluid communication structure integrally formed on the catheter body,

wherein the at least one fluid communication structure adapted to permit fluid flow along the catheter body and through a biological path comprises:

at least one bulk formed on the catheter body; and

at least one conduit formed on the bulk, wherein the at least one conduit is adapted to permit fluid flow through a biological path.

Claim 2 (canceled)

Claim 3 (withdrawn)

Claim 4 (currently amended): The catheter of claim 2 1, wherein the catheter has a plurality of bulks on the catheter body.

Claim 5 (original): The catheter of claim 4, wherein each bulk has a length, the length of each bulk being approximately three to seven millimeters.

Claim 6 (original): The catheter of claim 1, further comprising at least one marker attached to the catheter body, wherein the marker enables a user to position a radiating source within a biological path.

Claim 7 (currently amended): The catheter of claim 2 1, further comprising at least one balloon attached to a distal end of the outer surface of the catheter body.

Claim 8 (original): The catheter of claim 7, wherein the at least one balloon extends over the at least one bulk.

Claim 9 (original): The catheter of claim 8, wherein the at least one balloon extends over each conduit on a bulk such that the path for the fluid is formed by the conduit and the balloon.

Claim 10 (original): The catheter of claim 8, wherein a balloon control communicates with the balloon through the inner lumen or micro conduits.

Claim 11 (original): A catheter assembly, comprising:

- (a) a flexible tubular catheter body having an inner lumen and a guidewire channel;
- (b) a guidewire disposed within the guidewire channel for selectively positioning the catheter body;
- (c) a first balloon structure attached to a distal end of the catheter body, wherein the balloon is in communication with a balloon control through micro conduits;
- (d) a guidewire exit port in communication with the guidewire channel; and
- (e) at least one perfusion hole at a proximal side of the first balloon structure and at least one perfusion hole at a distal side of the first balloon structure to permit fluid flow through a biological path.

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Claim 12 (previously amended): The catheter assembly of claim 11, further comprising a second balloon enveloping the first balloon structure.

Claim 13 (original): A catheter for use in biological paths to provide fluids and/or gases perfusion along the length of the catheter when inserted in a biological path, wherein the catheter comprises two or more integral concentric or non concentric conduits; a more interior conduit used for placing devices used in catheter operations; a more exterior conduit for providing a track for fluids and/or gases without substantially obstructing fluid flow through the biological paths, wherein the catheter provides a continuous wall for the more exterior conduit.

Claim 14 (original): A catheter for use in biological paths to provide fluids and/or gases perfusion along the length of the catheter when inserted in a biological path, wherein the catheter comprises two or more integral concentric or non concentric conduits and one or more balloons attached to a more exterior conduit; a more interior conduit used for placing devices used in catheter operations; the more exterior conduit for providing a track for fluids and/or gases without substantially obstructing fluid flow through the biological paths when the one or more balloons are inflated, wherein the one or more balloons, when inflated, provide a wall for the more exterior conduit.

Claim 15 (currently amended): A The catheter according to claim 13, where the exterior conduit permits positioning a radiation and/or radioactive source at a desirable distance from the biological paths.

Claim 16 (currently amended): A The catheter according to claim 13, where the exterior conduit supports the walls of the biological paths.

Claim 17 (currently amended): A The catheter according to claim 13, where the exterior conduit is of flexible material.

Claim 18 (currently amended): A The catheter according to claim 13, where the exterior conduit prolongate along the entire length of the interior conduit.

Claim 19 (currently amended): A The catheter according to claim 13, where the exterior conduit are segments of conduits located along the entire length and/or at specific locations of the interior channel.

Claim 20 (currently amended): A The catheter according to claim 13, where the exterior conduit have perpendicular to its cross section micro-conduits and/or pores.

Claim 21 (currently amended): A The catheter according to claim 20, where the cross section of the micro-conduits and/or pores are parallelepipets of regular or irregular shape.

Claim 22 (currently amended): A The catheter according to claim 21, where the cross section of the micro-conduits and/or pores are circles, ellipses and/or rectangles.

Claim 23 (currently amended): A The catheter according to claim 20, where the micro-conduits and/or pores are arranged in an ordered manner and/or non-ordered manner.

Claim 24 (currently amended): A The catheter according to claim 13, where the interior conduits are used for introducing devices used in catheter operations.

Claim 25 (withdrawn)

Claim 26 (currently amended): A The catheter according to claim 24, where the devices used in catheter operations are guidewires.

Claim 27 (currently amended): A The catheter according to claim 13, where the exterior conduit can have around the whole or partial periphery open channels.

Claim 28 (currently amended): A The catheter according to claim 27, where the walls of the open channels have regular or irregular shape.

Claim 29 (currently amended): A The catheter according to claim 27, where the open channels are arranged in an ordered manner and/or non-ordered manner.

Claim 30 (currently amended): A The catheter according to claim 14, where the balloon constitutes a concentric or non concentric most external conduit with respect to the interior and exterior conduits.

Claim 31 (currently amended): A The catheter according to claim 14, where around the whole or partial periphery and at specific location of the exterior conduit are attached one or more balloons.

Claim 32 (currently amended): A The catheter according to claim 14, where the balloon prolongate along the entire length of the exterior conduit.

Claim 33 (currently amended): A The catheter according to claim 32, where the ends of the balloons are attached to distal locations of the edges of the external conduit.

Claim 34 (currently amended): A The catheter according to claim 14, where the balloons are located at specific locations along the entire length of the exterior conduit.

B, Claim 35 (currently amended): A The catheter according to claim 20, where said external conduits having on its outer surface pores which extend from said outer surface to the above mentioned micro-conduits, said pores being oriented at whatever desired angle with respect to the micro-conduits.

Claim 36 (original): The catheter of claim 19, wherein the segments and the space between the segments are covered by a membrane.

Claim 37 (original): The catheter of claim 27, wherein the open channels are covered by a membrane.

Claim 38 (previously amended): The catheter assembly of claim 1, wherein the catheter includes a valve.

Claim 39 (original): The catheter of claim 38 wherein the valve is a U-shaped metallic valve built into a lumen or channel of the catheter.

Claim 40 (original): The catheter of claim 38 wherein the catheter has multiple valves.

Claim 41 (previously amended): The catheter assembly of claim 1, wherein the catheter further comprises a pressure monitor or a blood pressure monitor.

Claim 42 (previously amended): The catheter assembly of claim 1, wherein the catheter further comprises a marker.

Claim 43 (original): The catheter of claim 42 wherein the marker is for visually marking the catheter with visual monitoring equipment.

Claim 44 (previously amended): The catheter assembly of claim 1, further comprising a stent or membrane for maintaining a cell wall.

Claim 45 (previously amended): The catheter assembly of claim 1, further comprising a guidewire.

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*B<sub>1</sub>* Claim 46 (original): The catheter of claim 45 further comprising a second guidewire, wherein at least one of the guidewires is made of nickel alloy.

Claim 47 (previously amended): The catheter assembly of claim 1, further comprising an over-the-wire guidewire.

Claim 48 (withdrawn)

Claim 49 (previously amended): The catheter assembly of claim 1, wherein a guidewire may be removed from the catheter and another wire placed into the catheter.

Claims 50-56 (withdrawn)

Claims 57-119 (canceled)

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